| Electronic Paten                     | t App     | lication Fe  | e Transm | ittal  |                         |  |  |
|--------------------------------------|-----------|--|----------|--------|-------------------------|--|--|
| Application Number:                  | 10        | 10801208   |          |        |                         |  |  |
| Filing Date:                         | 16        | 16-Mar-2004  |          |        |                         |  |  |
| Title of Invention:                  | Me<br>lay | Methods of manufacturing semiconductor devices having a ruthenium layer via automatic layer deposition |          |        |                         |  |  |
| First Named Inventor/Applicant Name: | Kw        | Kwang-hee Lee  |          |        |                         |  |  |
| Filer:                               | D.        | D. Randal Ayers/Michele McMahan  |          |        |                         |  |  |
| Attorney Docket Number:              | 56        | 5649-1277  |          |        |                         |  |  |
| Filed as Large Entity                |           |  |          |        |                         |  |  |
| Utility Filing Fees                  |           |  |          |        |                         |  |  |
| Description                          |           | Fee Code   | Quantity | Amount | Sub-Total in<br>USD(\$) |  |  |
| Basic Filing:                        |           |  |          |        |                         |  |  |
| Pages:                               |           |  |          |        |                         |  |  |
| Claims:                              |           |  |          |        |                         |  |  |
| Miscellaneous-Filing:                |           |  |          |        |                         |  |  |
| Petition:                            |           |  |          |        |                         |  |  |
| Patent-Appeals-and-Interference:     |           |  |          |        |                         |  |  |
| Notice of appeal                     |           | 1401   | 1        | 510    | 510                     |  |  |
|                                      |           | 1402   |          | 510    | 510                     |  |  |

| Description        | Fee Code          | Quantity | Amount | Sub-Total in<br>USD(\$) |
|--------------------|-------------------|----------|--------|-------------------------|
| Extension-of-Time: |                   |          |        |                         |
| Miscellaneous:     |                   |          |        |                         |
|                    | Total in USD (\$) |          |        | 1020                    |